

AMENDMENT AND RESPONSE TO OFFICE ACTION

Amendment

The Claims

1. (currently amended) A bacterial strain for production of ~~a fermentation product selected from the group consisting of antibiotics, organic acids, amino acids, proteins, vitamins, polyhydroxyalkanoates, and polysaccharides~~, wherein the bacterial strain is selected from the group consisting of *Ralstonia eutropha*, *Pseudomonas putida* and *Escherichia coli* and is genetically modified to express a heterologous nuclease gene, wherein the nuclease gene product is secreted into the periplasmic space and released when the bacteria is lysed.

2. (previously presented) The bacterial strain of claim 1 wherein the nuclease gene product is released in an amount effective to degrade at least 95% of all of the nucleic acid released following lysis of the cells in less than 24 hours and reduce the viscosity of a cell lysate in a bacterial cell culture having a density of at least 50 g/l so that recovery of the product is enhanced.

3. (original) The bacterial strain of claim 2 which produces a polyhydroxyalkanoate to levels of at least 40% of its dry cell weight.

4. (previously presented) The bacterial strain of claim 1 for use in an aqueous process to manufacture poly(3-hydroxyalkanoate) granule suspension which is essentially free of nucleic acids.

5. (cancelled)

6. (original) The bacterial strain of claim 1 wherein the nuclease gene is a heterologous gene obtained from an organism other than the bacterial strain.

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7. (currently amended) A bacterial strain for production of a fermentation product selected from the group consisting of antibiotics, organic acids, amino acids, proteins, vitamins, polyhydroxyalkanoates, and polysaccharides, wherein the bacterial strain is selected from the group consisting of *Ralstonia eutropha*, *Pseudomonas putida* and *Escherichia coli* and is genetically modified to express a heterologous nuclease gene integrated into the chromosome of the bacterial host, wherein the nuclease gene product is secreted into the periplasmic space and released when the bacteria is lysed -lyzed by osmotic shock, wherein the nuclease gene is integrated into a host strain selected from the group consisting of *Ralstonia eutropha*, *Methylobacterium organophilum*, *Methylobacterium extorquens*, *Aeromonas caviae*, *Azotobacter vinelandii*, *Alcaligenes latus*, *Pseudomonas oleovorans*, *Pseudomonas fluorescens*, *Pseudomonas putida*, *Pseudomonas aeruginosa*, *Pseudomonas acidophila*, *Pseudomonas resinovorans*, *Escherichia coli*, and *Klebsiella*.

8. (original) The bacterial strain of claim 1 wherein the nuclease is expressed in an amount effective to degrade at least 95% of all of the nucleic acid released following lysis of the cells in less than 24 hours.

Claims 9-10. (cancelled)

11. (withdrawn – currently amended) A fermentation process comprising adding to a growth medium a bacterial strain for production of a fermentation product selected from the group consisting of antibiotics, organic acids, amino acids, proteins, vitamins, polyhydroxyalkanoates, and polysaccharides, wherein the bacterial strain is selected from the group consisting of *Ralstonia eutropha*, *Pseudomonas putida* and *Escherichia coli* and is

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genetically modified to express a heterologous nuclease gene, wherein the nuclease gene product is secreted into the periplasmic space and released when the bacteria is lysed ~~lyzed by osmotic shock~~.

12. (withdrawn - currently amended) The ~~method~~ process of claim 11, wherein the bacterial strain is grown to cell densities of at least 50 g/l, and the nuclease gene product is released in an amount effective to degrade at least 95% of all of the nucleic acid released following lysis of the cells in less than 24 hours and reduce the viscosity of a cell lysate in a bacterial cell culture having a density of at least 50 g/l so that recovery of the product is enhanced.

13. (cancelled)

14. (withdrawn - currently amended) The ~~method~~ process of claim 12 further comprising growing the bacterial strain to produce levels of at least 40% of its dry cell weight.

15. (withdrawn - currently amended) The ~~method~~ process of claim 11 further comprising lysing the cells.

16. (withdrawn - currently amended) The ~~method~~ process of claim 14 further comprising using an aqueous process to manufacture a poly(3-hydroxyalkanoates) granule suspension which is essentially free of nucleic acids.

Claims 17 and 18. (cancelled)

19. (withdrawn - currently amended) A fermentation process comprising adding to a growth medium a bacterial strain for production of a ~~fermentation product~~ selected from the group consisting of antibiotics, organic acids, amino acids, proteins, vitamins,

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polyhydroxyalkanoates, and polysaccharides, wherein the bacterial strain is selected from the group consisting of *Ralstonia eutropha*, *Pseudomonas putida* and *Escherichia coli* and is genetically modified to express a heterologous nuclease gene integrated into the chromosome of the bacterial strain, wherein the nuclease gene product is secreted into the periplasmic space and released when the bacteria is lysed lyzed by osmotic shock, and
~~wherein the nuclease gene is integrated into a host strain selected from the group consisting of *Ralstonia eutropha*, *Methylobacterium organophilum*, *Methylobacterium extorquens*, *Aeromonas caviae*, *Azotobacter vinelandii*, *Alcaligenes latus*, *Pseudomonas oleovorans*, *Pseudomonas fluorescens*, *Pseudomonas putida*, *Pseudomonas aeruginosa*, *Pseudomonas acidophila*, *Pseudomonas resinovorans*, *Escherichia coli*, and *Klebsiella*.~~

Claim 20. (cancelled)

21. (withdrawn - currently amended) The method process of claim 11 wherein the strain expresses nuclease into the periplasmic space in an amount effective to degrade at least 95% of all of the nucleic acid released following lysis of cells in less than 24 hours.

Claims 22-23. (cancelled)